AGE-GROUPING METHODS IN DIPTERA OF MEDICAL IMPORTANCE—With Special Reference to Some Vectors of Malaria, World Health Organization Monograph Series No. 47—T. S. Detinova, Martsinovsky Institute of Medical Parasitology and Tropical Medicine, Ministry of Health, Moscow. (Translated into English) World Health Organization, Geneva, 1962—Distributed in the United States by Columbia University Press, International Documents Service, 2960 Broadway, New York 27. 216 pages, Clothbound, $5.25.

This monograph presents the detailed methods and findings of a highly complex series of entomological studies that have culminated in techniques for the accurate age grading of adult female mosquitoes, gnats and sand flies. The techniques are based on microscopic examination of the ovaries to observe physical changes associated with the taking of a blood-meal and subsequent maturation and deposition of eggs. In application to *Anopheles* mosquitoes a sample of a field population can now be age graded and for each female the number of previous blood-meals can be determined. Knowledge of the physiologic age of an individual vector and the age composition of a vector population is essential in the epidemiologic study of a disease or in estimating the effectiveness of control and eradication programs. These studies represent a major breakthrough in technique that has already proven to be invaluable in California in studies of the mosquito vectors of the viral encephalitides and the pest mosquitoes that are of public health importance.

The monograph is arranged in a series of nine chapters that take the reader through the Russian studies on application of the techniques to *Anopheles* mosquitoes and malaria. Techniques, interpretations, references and practical applications are considered in detail and the preface, foreword and an annex by other workers reinforce the values and implications of these techniques for the betterment of man's health status.

W. C. Reeves, Ph.D.

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PROGRESS IN MEDICAL GENETICS—Volume II—Edited by Arthur G. Steinberg, Ph.D., Professor of Biology, Department of Biology, and Associate Professor of Human Genetics, Department of Preventive Medicine, Western Reserve University, Cleveland, Ohio; and Alexander G. Bearn, M.D., Associate Professor, The Rockefeller Institute; Physician, Hospital of the Rockefeller Institute, New York; Grune & Stratton, Inc., 381 Park Avenue South, New York 16, N. Y., 1962. 378 pages, $12.75.

This volume, and the earlier one in the series, stand to the annual bibliographic review of human genetics in the Journal of Chronic Diseases under Dr. V. McKusick's editorship as the series, Advances in Internal Medicine, stands to the Year Book of Medicine. A few topics have been selected for critical and speculative, as well as bibliographic, review.

The first three chapters deal with polymorphic systems in human serum and plasma, which have not been included in most recent reviews. A. G. Steinberg discusses the Gm and Inv groups, and H. Cleve and A. G. Bearn take up the group specific component of serum. The "phenotypes" of these systems are far removed from gross observation and are near the level of the primary gene product. The plasma transferrins, the third system and the one nearest clinical medicine, are discussed by E. R. Giblet. All the authors use an operational approach to introduce their subjects, which is helpful in such complex experimental settings. Gene frequencies are presented by all authors for a variety of racial groups. The important topic of the heterozygote's selective advantage is raised by each author, and perhaps too much hope is offered for an early solution. When the phenotype itself is so hard to recognize, the heterozygote's advantage may be equally covert. It is worth remembering that while the discovery of new polymorphic systems proceeds apace, the heterozygote's mathematically necessary advantage, a point of decisive medical importance, has been established in only one or possibly two instances.

C. R. Scriver's chapter on hereditary aminoacidurias is the longest in the book. It covers a wide range of physiological, biochemical and genetic data and makes the difficulties of technique and analysis explicit. For the discussion of specific aminoacidurias, Scriver uses the *ad hoc* classification of the conditions as overflow, renal or general metabolic. This field as perhaps no other in human genetics illustrates the hardship of working in biochemistry for genetic purposes above the level of the primary gene product in a mammal having untold avenues to maintaining some semblance of homeostasis and health.

S. Tokuda and R. D. Owen have contributed an interesting and largely speculative article on antibody synthesis, which contains an elaboration and second thoughts about the clonal selection theory of Burnet. H. R. Holman presents a summary of the evidence for familial predisposition to rheumatic diseases.

L. B. Russell and S. Gluecksohn-Waelsch in the next two chapters discuss the genetics of experimental mammals for the light they may lend human genetics. Russell gives a valuable detailed discussion of the origin of chromosomal aberrations and explains how inferences may be made of the point in meiosis or mitosis of the parents or progeny where the aberration arose. She also emphasizes the extent to which more markers and linkage groups would strengthen these inferences in human studies, where they remain largely as speculative as the heterozygote's advantage in polymorphic systems. Gluecksohn-Waelsch describes the variety of models of human genetic diseases in experimental mammals, which are currently known and, in her eyes, unfortunately ignored in medical research. J. Francois in the last chapter reviews part of the enormous number of genetic eye diseases.

The price of this book, and of most other symposia with necessarily short lives, is high.

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EXPANDING GOALS OF GENETICS IN PSYCHIATRY—Anniversary Symposium of the Department of Medical Genetics, New York State Psychiatric Institute, October 27-28, 1961; and Proceedings of Sixth Annual Meeting of Eastern Psychiatric Research Association. Edited by Franz J. Kallmann, M.D., Chief of Psychiatric Research, Department of Medical Genetics, New York State Psychiatric Institute; Professor of Psychiatry, Columbia University, New York; with the assistance of L. Erlenmeyer-Kimling, Ph.D., E. V. Glanville, Ph.D., and J. D. Rainer, M.D. Grune & Stratton, Inc., 381 Park Avenue South, New York 16, N. Y., 1962. 275 pages, $6.75.

With the increasing interest in genetic factors in disease, this book is a very timely one. It consists of a series of presentations given by an outstanding group of scientists at a symposium on Genetics in Psychiatry held in October of 1961 at the New York State Psychiatric Institute. The book is divided into five sections:

1. Progress in Behavioral and Psychiatric Genetics.
2. Progress in Basic Genetics.
3. Progress in Genetic Studies of Neurological Disorders, Deafness and Mental Deficiency.
4. Functions of a Medical Genetics Department in the Field of Mental Health, and
5. Testimonials and Awards.

Among the wide variety of topics covered in the book are the biochemistry and function of DNA, the molecular changes underlying mutation and gene action, the micromanipulation of chromosomes and the biochemical metabolic and clinical effects of mutated genes and disarranged chromosomes. There are contributions on the methodological problems arising in sampling design and in the inves-